0019

WATER QUALITY MEMORANDUM

Utah Coal Regulatory Program

OK

July 13, 2004

TO: Internal File

THRU: Wayne Hedberg, Permit Supervisor DWH

FROM: Steve Fluke, Reclamation Hydrogeologist SFF

RE: 2004, First Quarter Water Monitoring, West Ridge Resources, Inc., West Ridge Mine, C/007/0041-WQ04-1, Task ID #1955

1. Was data submitted for all of the MRP required sites? YES [X] NO [ ]

2. On what date does the MRP require a five-year resampling of baseline water data.

Resampling due date.

Five-year baseline resampling to occur at the time of the mid-term review. The next baseline resampling should be conducted by October 1, 2006.

3. Were all required parameters reported for each site? YES [X] NO [ ]

4. Were irregularities found in the data? YES [X] NO [ ]

Of the eight monitored spring sites, only two (SP-15 and SP–16) could be accessed due to mud and snow. No flow was reported for SP-15 and the conductivity reported for SP-16 was historically low (200 umhos/cm). However, the TDS concentration reported by the laboratory for SP-16 was consistent with previous data indicating a faulty conductivity field meter.

Of the nine monitored stream sites, the three sites at the upper portion of Whitmore Canyon (ST-9, ST-3, and ST-10) could not be accessed due to snow and mud. No flow was recorded for four of the stream sites (ST-8, ST-4, ST-6A, and ST-7). Three of these streams are ephemeral and only ST-8 (which was snow covered at the time of monitoring) reports intermittent flow. Site ST-8 is located in Whitmore Canyon so it is likely that the three stream sites not accessed up canyon were also snow covered and would not have flow.

The two remaining stream sites, ST-5 and ST-6, located within C Canyon and downstream of the mine site, Collect mine-discharge water mixed with storm water runoff when samples sit in the automatic samplers for an unknown period of time before being collected and sent to the laboratory for analysis. Site ST-5 reported elevated concentrations of conductivity (2200 umhos/cm), dissolved potassium (9.63 mg/L), sulfate (733 mg.L), and TDS (1438 mg/L). This is not uncharacteristic of an ephemeral stream during a storm event. No flow was reported for site ST-6 for this same storm event.

Depth to water for Well DH 86-2 was reported well below the previous low depth of 132 feet (November 2003) to a depth of 440 feet this quarter. Measured water depth for the well has been steadily decreasing from 79 feet in February 2000 to 132 feet in November 2003. No explanation was given in the Division's database.

5. Were DMR forms submitted for all required sites?

1st month, YES [X] NO [ ]
2nd month, YES [X] NO [ ]
3rd month, YES [X] NO [ ]

DMR data is submitted to the DOGM database. No flow was reported for UPDES site 001 (discharge from the sediment pond).

6. Were all required DMR parameters reported? YES [X] NO [ ]

7. Were irregularities found in the DMR data? YES [ ] NO [X]

Reported concentrations of TDS exceed the 2,000 lbs/day limit for February and March at 2,019 lbs/day and 2,155 lbs/day, respectively.

8. Based on your review, what further actions, if any, do you recommend?

Continue discussions with the permittee and mine hydrologist regarding whether the automatic sampling method for some of the stream sites can be improved upon. Implement a plan to have the automatic sampler collection and holding times reported to DOGM to aid in the evaluation of the analytical results. Although elevated concentrations of some parameters were reported for ST-5, the concentrations were consistent with previous reports. I will review the sampling plan with the mine hydrologist the first week in August 2004.

Find out why the depth to water dropped so much in Well DH 86-2. This is a significant loss of water (approximately 300 feet) for a well that has previously been relatively stable. Was the well damaged or affected by mining, or possibly a misreading of the water meter?

Exceedence of TDS concentrations at UPDES site 002 occurred during four months in 2003. Follow up on the need for DWQ to amend the UPDES permit.

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